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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/589,573 06/07/00 LEWIS

M 945P/BF1413

WM02/0618

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EXAMINER

NGUYEN, K

ART UNIT

PAPER NUMBER

2671

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DATE MAILED: 06/18/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/589,573

Applicant(s)

LEWIS, MICHAEL C.

Examiner

Kimbinh T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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DETAILED ACTION

Double Patenting

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. Claims 1-16 provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-16 of copending Application No. 09/239413. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

3. This application is exactly as the parent application 09/239413 filed on 01/28/99.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1, 2, 4, 9-11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watkins et al. (4,918,626) in view of Foran et al. (5,684,939).

Claim 1, Watkins et al. discloses a) determining if a portion of the object intersects a current position of the plurality of positions and providing an output if the portion intersects the current position (col. 4, lines 11-19); b) providing a mask for the position if the position intersects the current position, the mask indicating an extent to one portion occupies the area of the current position (col. 9, lines 16-26); c) Foran et al. discloses using the mask to provide antialiasing (col. 15, line 52 through col. 16, line 15); repeating steps (a) -(c) for each object; d) repeating steps a) - e) for the positions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Foran's teaching into the Watkins' method, because it would improve a region mask based on the supersample coverage mask indicating an extent of polygon coverage within each pixel when the antialiased display data is displayed.

Claims 2 and 11, Watkins discloses using at least one mask to blend information relating to at least one portion of the subareas (col. 9, lines 56-65).

Claim 4, Watkins discloses each of the plurality of positions is a pixel and wherein the current position is a current pixel on the display (col. 4, lines 15-30).

Claim 9, Watkins discloses determining if a portion of the objects intersects the positions (col. 4, lines 67-68); Foran discloses providing a mask of positions that the portion intersects, the mask indicating an extent to the portion occupies the area of positions; using the mask to provide

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antialiasing of positions that the portion interests (col. 15, lines 52-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Foran's teaching into the Watkins' method, because providing a region mask based on the supersample coverage mask that could improve properly antialias intersecting polygons.

Claim 10, Watkins discloses display a plurality of positions, the position having an area (col. 4, lines 15-46); Foran discloses a processor coupled with the display, an interpolator coupled with the processor (figs. 4a, 4b) ; further, the rationale provided in the rejection of claim 1 is applicable hereto.

Claim 16, the rationale provided in the rejection of claims 9 and 10 is applicable hereto.

6. Claims 3, 5-8, 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watkins et al. (4,918,626) in view of Foran et al. (5,684,939) and further in view of Kuchkuda et al. (5,872,902).

Claims 3 and 12, Kuchkuda et al. discloses summing the information of subareas to provide a resultant; dividing the resultant by the number of subareas (col. 5, lines 11-18). It would have been obvious to one of ordinary skill in the art to include this feature, because it could improve a method for rendering of fractional pixels for anti-aliasing and pixel blending technique by calculating pixels of complex coverage areas.

Claim 5, Kuchkuda et al. discloses f) removing the portion if the portion is obstructed (col. 16, line 52). It would have been obvious to one of ordinary skill in the art to include this feature, because removing a hidden surface that could improve rendering visual images for anti-aliasing.

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Claims 6 and 14, Kuchkuda et al discloses g) sorting each portion based on the z-value (col. 18, lines 2-5). It would have been obvious to one of ordinary skill in the art to include this feature, because applying z sorting that could improve rendering visual images for anti-aliasing and pixel blending technique.

Claims 7 and 8, Watkins discloses repeating steps a) through c) (col. 2, lines 16-19) and Kuchkuda discloses steps f) through g) for each object (col. 16, lines 50-53) and for the positions. It would have been obvious to one of ordinary skill in the art to include this feature, because rendering pipeline that would improve blending and antialiasing rendering algorithms used in the system.

Claim 13, Watkins discloses each of the plurality of positions is a pixel and wherein the current position is a current pixel on the display (col. 4, lines 15-30).

Claim 15, Foran discloses a removal unit coupled with the processor and interpolator (fig. 4b), in response to the output and without determining a precise axial position of the portion, the obstructed object identifies the portion is visually obstructed and removes the portion is obstructed (col. 9, lines 1-10); and Kuchkuda discloses sorting the portion based on the z value (col. 18, lines 2-5). It would have been obvious to one of ordinary skill in the art to include this feature, because applying hidden surface removal and z sorting based on z value that could improve anti-aliasing method.

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7. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 2671.

8. Any response to this action should be mailed to

Commissioner of Patents and Trademarks Office

Washington, D.C. 20231

Or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 305-9724 (for informal or draft communications, please label

“PROPOSED” or “DRAFT”

Hand- delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimbinh Nguyen whose telephone number is (703) 305-9683. The examiner

can normally be reached on Monday through Friday From 7:30 a.m. to 5:00p.m. (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Mark Zimmerman, can be reach on (703)305-9798. However, in such a case, please allow at least one business day before contacting Mark Zimmerman

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703)305-4700.

Kimbinh Nguyen

June 11, 2001



**MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**